First host records for *Exasticolus fuscicornis* (Cameron, 1887) (Hymenoptera: Braconidae: Homolobinae)

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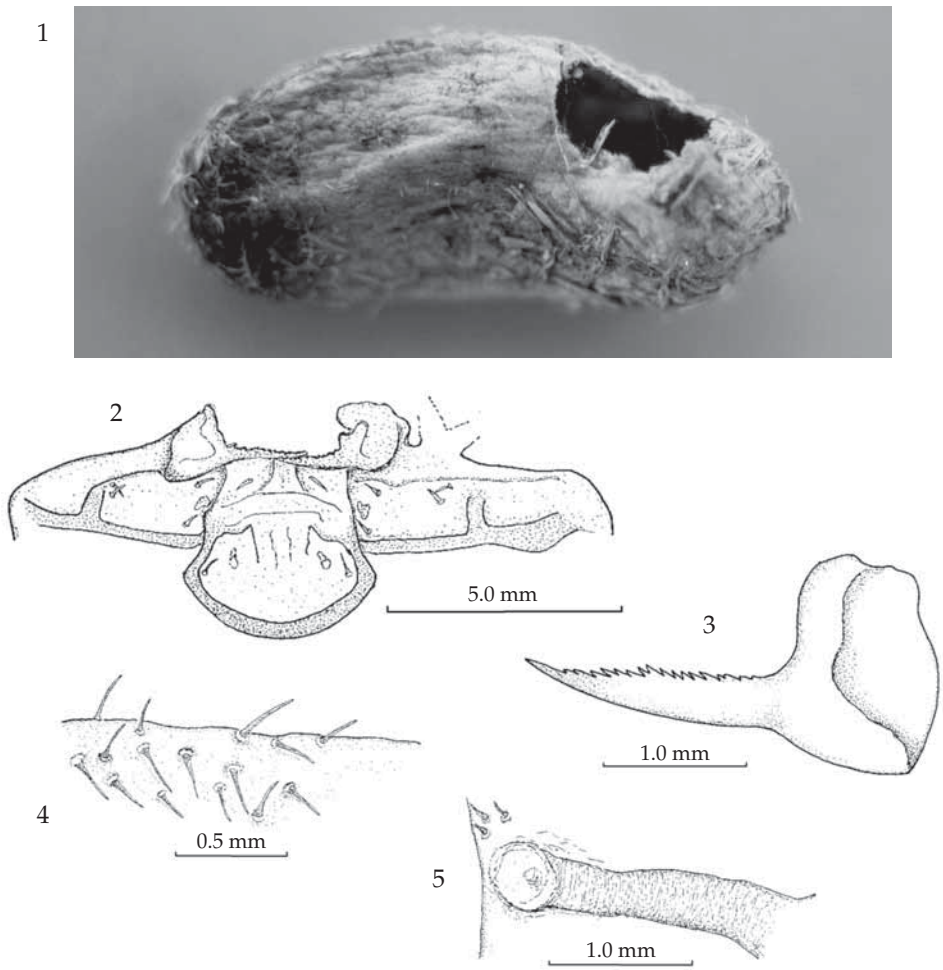
Two new host records for *Exasticolus fuscicornis* (Cameron, 1887) (Hymenoptera: Braconidae: Homolobinae) are presented with detailed larvae morphology and other biological information.

The subfamily Homolobinae was established by van Achterberg in 1979 to include four genera and 50 species. Nowadays remain two genera: *Exasticolus* van Achterberg, 1979 and *Homolobus* Foerster, 1862. The two other genera are included in the subfamily Charmontinae van Achterberg, 1979. Both include solitary koinobiont endoparasitoids of larvae of Lepidoptera. Van Achterberg (1979) reviewed numerous rearing records, but detailed studies on the biology are lacking. Both, van Achterberg (1979) and Shaw & Huddleston (1991) noted that Noctuidae and Geometridae are the most commonly recorded hosts of the genus *Homolobus*. The genus *Charmon* Haliday, 1833, seems to have a broader host range, with Tortricidae and Gelechiidae among the more frequently recorded hosts. Species of the genus *Exasticolus* and the most commonly encountered New World species of the genus *Homolobus* have very short ovipositors. They attack exposed, nocturnally feeding hosts (Wharton in Wharton et al., 1997).

The genus *Exasticolus* includes four described valid species (Braet & Achterberg, 2001) and is restricted to the New World, with species occurring both in southern Nearctic and Neotropical regions. There is only a single host record to *Exasticolus nigriceps* (Enderlein, 1920) and this is from Lasiocampidae (*Gloveria ballovi* Schaus) in Costa Rica (van Achterberg, 1979). Braet & Achterberg (2001) considered the general biology of *Exasticolus* as unkown. Other members of the subfamily are known be parasitoids of Lepidoptera larvae with a more or less exposed way of life (such as Geometridae and Noctuidae).

In 2002-2003 several specimens (of both sexes) of *Exasticolus fuscicornis* were reared in Brazil from larvae of a *Leuciris* spec. (Lepidoptera: Geometridae) collected on *Stryphnodendron adstringens* (Martius) Coville (Mimosaceae) in Cerrado area in São Carlos, São Paulo State and from *Spodoptera frugiperda* (J.E. Smith, 1797) larvae (Lepidoptera: Noctuidae) collected from *Zea mays* Linnaeus plants in Sete Lagoas, Minas Gerais State. The lepidopteran larvae were left on the leaves of the host plant in the laboratory, where they spun a whitish silky cocoon (fig. 1) from which the parasitoids emerged under lab conditions.

Detailed morphology of *Exasticolus fuscicornis* larvae is illustrated (figs 2-4). The



Figs 1-5, *Exasticolus fuscicornis* (Cameron, 1887), final larval instar, but 1 of cocoon. 1, cocoon; 2, cephalic structures; 3, mandible; 4, skin; 5, spiracle.

skin is covered by setae (fig. 4) with spiracle as fig. 5; their mandibles have several small teeth on their margin (fig 3) and the other cephalic structures are shown in fig. 2.

This species could be used in biological control of *Spodoptera frugiperda*, an insect pest of corn plants. Only one specimen of the parasitoid emerged from its cocoon, but the parasitism under laboratory conditions is very common. Likely they could be applied to the biological control of *S. frugiperda* in corn plantations.

Concerning the *Leuciris* host we can add some biological information. The larvae of the parasitoid are white green first and become yellow just before the pupation. The larvae spun a white silken cocoon and the adult emerged after 10-12 days.

The larvae and adults specimens as well the cocoons have been deposited in collections at the Departamento de Ecologia e Biologia Evolutiva da Universidade Federal de

São Carlos, São Carlos, Brazil (DCBU) and the National Museum of Natural History at Leiden, The Netherlands (RMNH).

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